FINAL PERFORMANCE REPORT

Grant Number:	**NAG5-2615**
Grant Titles:	***"Deep PSPC Observations of Distant Clusters of Galaxies"*** ***"Discovery of Cooling Flows in Distant Clusters of Galaxies"*** ***"Gravitational Lensing and the Mass Distribution in Clusters of Galaxies"***
PI:	**Dr. Megan Donahue**
Institution:	**Space Telescope Science Institute**
Grant Period:	**06/15/94 - 12/14/95**

This grant encompassed at least two separate projects to study the X-ray emissions from clusters of galaxies. Two papers have resulted thus far from this study:

Donahue, M. & Stocke, J. T., 1995, ApJ, 449, 554, "ROSAT Observations of Distant Clusters of Galaxies."

Donahue, M., 1996, ApJ, 468, 79, "Temperature and Metallicity of a Massive X-ray Cluster at Redshift 0.54."

The HRI observations of two clusters which are strong gravitational lenses, Abell 2218 and Abell 1689, are being used in conjunction with ASCA data to sort out the gravitational potentials of those clusters. A paper in collaboration with M. Loewenstein of NASA Goddard is in preparation and a conference proceeding describing the early stages of this work was presented by M. Loewenstein in the Spring of 1996. (The proceeding is in press.) At least one more paper should result from this project, describing the HRI and ASCA observations of the clusters Abell 2218 and Abell 1689.

FINAL PATENT/INVENTION REPORT

Grant: NAG5-2615

Principal Investigator: Dr. Megan Donahue

Institution: Space Telescope Science Institute

Patents/Inventions Developed: NONE